NO. 2032 P. 4 COPY

Form PTO-1595 (Rev. 03/01)	RECORDATION FORM	M COVER SHEET	U.S. DEPARTMENT OF COMMERCE
(Rev. 03/01) OMB No. 0651-0027 (exp. 5/31/2002)	PATENT	SONLY	U.S. Patent and Trademark Office
Tab settings ⇔ ⇒ ▼	VV	V V	, A A
To the Honorable Commissioner	r of Patents and Trademarks:	Please record the attached (original documents or copy thereof.
1. Name of conveying party(ies):		T	s of receiving party(ies)
Monsanto Company	!	Name: Metaboli	
		Internal Address:	
Additional name(s) of conveying party(ies)) attached? 🖵 Yes 🔳 No		
3. Nature of conveyance:		1	
Assignment	☐ Merger		
Security Agreement	Change of Name	Street Address: _	313 Third Street, 2nd Floor
Other			
·		City: Cambridge	State: MA zip: 02142
Execution Date:		Additional name(s) & ar	odress(es) attached? 📮 Yes 🔼 No
4. Application number(s) or patent	• •		
If this document is being filed to	gether with a new applic	cation, the execution de	ate of the application is:
A. Patent Application No.(s)		B. Patent No.(s)	
09/845.578, a CON of 09/122,1	147 filed 7/24/98	l	
	I Additional numbers att:	 ached? 🖵 Yeş 🗷 No	
5. Name and address of party to w	whom correspondence		olications and patents involved:
concerning document should be	mailed:		
Name: Patrea L. Pabst, Esq.		7. Total fee (37 CFR 3	3.41) <u>\$ 40.00</u>
Internal Address:		☐ Enclosed	
Holland & Knight LLP		Authorized to b	oe charged to deposit account
Suite 2000			
Decree Address 1201 West Pea	-Li Circle N G	8. Deposit account nui	mber:
Street Address: 1201 West Peac	Thues Succeive.	50-1868	
City: Atlanta State: GA	Zip: 30309	(Attach duplicate copy of	f this page if paying by deposit account)
	DO NOT USE	THIS SPACE	
9. Statement and signature.			
To the best of my knowledge and is a true copy of the original doc	d belief, the foregoing in ument.	formation is true and co	orrect and any attached copy
Patrea L. Pabst, Esq.			1/16/1003
Name of Person Signing	j	Signature	Date
Total nur	mber of pages including cover	had attachments and do	A

Mall documents to be recorded with required cover sheet information to: Commissioner of Palents & Trademarks, Box Assignments Washington, D.C. 20231

Form PTO-1595 (Rev. 03/01) OMB No. 0651-0027 (exp. 5/31/2002) Tab settings ⇔ ⇔ ▼ To the Honorable Commissioner u 102340 1. Name of conveying party(ies):	U.S. Patent and Trademark Office
Monsanto Company	Name: Metabolix, Inc.
Additional name(s) of conveying party(les) attached? 📮 Yes 📮 No	
3. Nature of conveyance:	
Assignment	Street Address: 313 Third Street, 2nd Floor
CotherExecution Date:	City: Cambridge State: M.A Zip: 02142 Additional name(s) & address(es) attached? Yes No
	Additional name(s) & address(es) attached? 📮 res 📮 No
4. Application number(s) or patent number(s):	
If this document is being filed together with a new appl	ication, the execution date of the application is:
A. Patent Application No.(s)	B. Patent No.(s)
09/845,578, a CON of 09/122,147 filed 7/24/98	
Additional numbers al	tached? 📮 Yes 🗷 No
Name and address of party to whom correspondence concerning document should be mailed;	6. Total number of applications and patents involved:
Name: Patrea L. Pabst, Esq.	7. Total fee (37 CFR 3.41)\$ 40.00
Internal Address:	☐ Enclosed
Holland & Knight LLP	Authorized to be charged to deposit account
Suite 2000	8. Deposit account number:
Street Address: 1201 West Peachtree Street N.E.	50-1868
City: Atlanta State: GA Zip: 30309	(Attach duplicate copy of this page if paying by deposit account)
DO NOT US	THIS SPACE
9. Statement and signature. To the best of my knowledge and belief, the foregoing is a true copy of the original document. Patrea L. Pabst, Esq.	1/16/2003
Name of Person Signing	Signature Date
	er sheet, attachments, and documents:



U.S. Department of Commerce

FORM PTO-1595		U.S. Department of Commerce
(Rev. 6-93) OMB No. 0651-0011 (exp. 4/94)	100916174	Patent and Trademark Office
12 - 3 - 69 To the Honorable Commissioner of	Patents and Trademarks: Please record the attack	ched original document or copy thereof.
1. Name of conveying parties:	2. Name and	l address of receiving party:
Jawed ASRAR Jean R. PIERRE	Name: N	MONSANTO COMPANY
	Internal A	.ddress:
Additional name(s) of conveying party(ies) attached?		dress: 800 N. Lindbergh Boulevard
3. Nature of conveyance: Assignment Merger Security Agreement Change o	1	Louis State: Missouri Zip: 63167
Other	l.	ame(s) & address(es) attached? Yes XX No
Execution Dates: Asrar - October 5, 1998 & Pierre-	- October 12, 1998	
4. Applicationnumber(s) or registrationnumber(s): Attorn	ney Docket No. MOBT:140	
If this document is being filed together with a new applic	cation, the execution date of the application is	::
A. Patent ApplicationNo.(s): 09/122,147	B. Patent	No.(s):
09,120	2, 14 /	
Ollion	Additional numbers attached? Yes XX	No
Name and address of party to whom correspondence con document should be mailed:	cerning 6. Total num	nber of applications and patents involved: 1
Name: Vikki Meriwether, Paralegal	7. Total fee	(37 C.F.R. 3.41)\$40.00
Arnold, White & Durkee	-	orized to be charged to deposit account, if check
P.O. Box 4433	insu	fficient or inadvertentlyomitted
City: Houston State: Texas Zip: 77210	8. Deposit a	ccount number: 01-2508/MOBT140/KAM uplicate copy of this page if paying by deposit
	DO NOT USE THIS SPACE	
9. Statement and signature.		
To the best of my knowledge and belief, the foregoing in	formation is true and correct and any attoch	H.
Patricia A. Kammerer	- Flil	Gimmere 12/02/98
Name of Person Signing, Reg. No. 29,775		Signature Date geover sheet, attachments and documents: 2 & Check
	ents to be recorded with required cover sheet inform: nark Office, Office of Public Records, Crystal Gatew Washington, D.C. 2023 1	
81 40.00 OP	EXPRESS MAIL MAILING LABEL	

I hereby certify that this paper or fee is being deposited with the United States Postal Service "EXPRESS MAIL POST OFFICE TO ADDRESSEE" service under 37 C.F.R. 1.10 on the date indicated above and is addressed to:

U.S. Patent & Trademark Office, Office of Public Records, Crystal Gateway 4, Room 335, Washington, D.C. 20231

Number:

EM219703925US

Date of Deposit:

December 2, 1998

MAY 23, 2003

PTAS

HOLLAND & KNIGHT LLP PATREA L. PABST, ESO. 1201 WEST PEACHTREE STREET N.E. SUITE 2000 ATLANTA, GA 30309

Under Secretary of Commerce For Intellectual Property and Director of the United States Patent and Trademark Office Washington, DC 20231 www.uspto.gov



UNITED STATES PATENT AND TRADEMARK OFFICE NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 01/16/2003

REEL/FRAME: 013676/0568

NUMBER OF PAGES: 7

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

MONSANTO COMPANY

DOC DATE: 05/14/2001

ASSIGNEE:

METABOLIX, INC. 313 THIRD STREET, 2ND FLOOR CAMBRIDGE, MASSACHUSETTS 02142

SERIAL NUMBER: 09845578

PATENT NUMBER:

FILING DATE: 04/30/2001

ISSUE DATE:

THERESA FREDERICK, EXAMINER ASSIGNMENT DIVISION OFFICE OF PUBLIC RECORDS

RECEIVED

JUN 02 2003

PATENT DEPARTMENT

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UNITED STATES DEPARTMENT OF COMMERCE Patent and Trademark Office

ASSISTANT SECRETARY AND COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231

MARCH 19, 1999

ARNOLD, WHITE & DURKEE
VIKKI MERIWETHER, PARALEGAL

P.O. BOX 4433 HOUSTON, TX 77210-4433 *100916174A*

MOST 140--

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RECORDATION DATE: 12/02/1998

REEL/FRAME: 9615/0048

NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

ASRAR, JAWED

DOC DATE: 10/05/1998

ASSIGNOR:

PIERRE, JEAN R.

DOC DATE: 10/12/1998

ASSIGNEE:

MONSANTO COMPANY 800 N. LINDBERGH BOULEVARD ST. LOUIS, MISSOURI 63167

SERIAL NUMBER: 09122147

PATENT NUMBER:

FILING DATE: 07/24/1998

ISSUE DATE:

MARY BENTON, EXAMINER ASSIGNMENT DIVISION OFFICE OF PUBLIC RECORDS

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Previously No: Required
Appl. Info
Reg/Grant Info
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Py: Checked 28

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PATENT FILE NO. MOBT:140

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ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, the undersigned, do hereby:

SELL, ASSIGN AND TRANSFER to Monsanto Company (the "Assignee"), having a place of business at 800 N. Lindbergh Blvd., St. Louis, Missouri 63167, the entire right, title and interest for the United States and all foreign countries in and to any and all improvements which are disclosed in:

Provisional United States patent application Serial No. 60/053,720, filed July 25, 1997, entitled "PHA COMPOSITIONS AND METHODS FOR THEIR USE IN THE PRODUCTION OF PHA FILMS;"

United States patent application Serial No. 09/122,147, filed July 24, 1998, entitled "PHA COMPOSITIONS AND METHODS FOR THEIR USE IN THE PRODUCTION OF PHA FILMS;"

such applications and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such improvements; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such improvements in the Assignee, and for securing, maintaining and enforcing proper patent protection for such improvements;

TO BE BINDING on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

,)		
Signature Links on	Date: October 5	, 1998
Name: Jawed ASRAR		•
State of Missouri)) ss.	
County of St. Louis)	
personally appeared Jawed ASRAR, kno	authority, on this 5th day of October own to me to be the person whose name is subscribed me that he executed the same of his own free red. Notary or Consular Officer	, 1998, ribed to the will for the
	April 1995	
Signature: Name: Jean R. PIERRE	Date: October 12th	_, 1998
) ss.	
personally appeared Jean R. PIERRE, kr	authority, on this 18 day of 1500 nown to me to be the person whose name is subscitor me that he executed the same of his own free ed.	ribed to the
[SEAL]	Notary or Consular Officer	-
CO INV		

ig.

No. of

OFFICE

PATENT ASSIGNMENT

THIS PATENT ASSIGNMENT ("Assignment") is made and entered into as of this 14th day of May, 2001, by and between Metabolix, Inc., a Delaware corporation, having its principal place of business located at 303 Third Street, Cambridge, Massachusetts 02142 (hereinaster "Assignee"), and Monsanto Company, a Delaware corporation, having its principal place of business located at 800 North Lindbergh Boulevard, St. Louis, Missouri 63167 (hereinaster "Assignor").

WHEREAS, except as otherwise indicated, Assignor owns or has owned the patents and patent applications identified on <u>Schedule A</u> and <u>Schedule B</u>, attached hereto, some of which have lapsed or have been abandoned;

WHEREAS, Assignce acknowledges that some of the patents and patent applications listed on Schedule A and Schedule B have been abandoned or have lapsed; and

WHEREAS, Assignor and Assignee are parties to the Transaction Documents (as defined in a certain Asset Purchase Agreement of even date herewith entered into by the parties hereto) which provides for, among other things, the assignment of the identified patents and patent applications from Assignor to Assignee.

NOW, THEREFORE, in consideration of the mutual covenants and obligations contained herein and in the Transaction Documents, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

Assignor does hereby sell, assign, transfer, and set over unto said Assignee all of its right, title, and interest in and to the inventions described and/or claimed in, and the patents and patent applications relating to polyhydroxyalkanoates ("PHAs")identified on Schedule A and Schedule B, and any reissues or reexaminations thereof, and any continuing, continuation, continuation-in-part, divisional, foreign counterpart, and/or Patent Cooperation Treaty applications which may be hereinafter filed, and in and to any Letters Patent which may be granted and issued, in and for the United States of America and all foreign countries, including all treaty and convention rights, and the right to sue for present, past, and future infringement, enforce any rights and file any causes of action related thereto, either in law or equity, and to all income, royalties, fees, damages, and payments now or hereafter due or payable with respect thereto (hereinafter "Patents"). The identified Patents shall be held and enjoyed by said Assignee, its successors and assigns, to the fullest extent permissible under any applicable laws and ends of the terms for which all Letters Patents therefor may be granted, as fully and entirely as the same would have been held and enjoyed by the undersigned if this Assignment had not been made.

Assignee is hereby authorized to make application for and to receive Letters Patent for said inventions in any countries at its election. And by this covenant the Assignor agrees to execute or procure further necessary assurance of title to said inventions, patents and patent applications, and at any time, upon the reasonable request and at the expense of said Assignee, will execute and deliver any and all papers that may be necessary or desirable to

perfect the title to said inventions, patents and patent applications in Assignee, its successors, assigns or other legal representatives; and upon the reasonable request of said Assignee, will execute any additional applications for patents for said inventions, or any part or parts thereof, and for the reissue of any Letters Patent to be granted therefor; and will make all rightful oaths and do all lawful acts requisite for procuring the same or for aiding therein, without further compensation, but at the expense of said Assignee, its successors, assigns, or other legal representatives.

Notwithstanding the foregoing, Assignee shall prepare, execute and deliver any and all documents related to the recordation or legalization of any rights granted herein. And, as between the parties hereto, Assignee shall be solely obligated and responsible for any and all expenses associated with such recordation or legalization, including without limitation any preparation, execution and delivery expenses, and shall further be obligated and responsible for any expenses incurred in Assignee's efforts to obtain, establish or perfect ownership of right, title or interest in or to the Patents. Assignee agrees that it shall not record this Assignment in or with the United States Patent and Trademark Office or in or with any patent office foreign to the country of the United States of America. The assignment on Schedule C attached hereto serves as an exemplary form of instrument for recording purposes.

MONSANTO COMPANY 800 North Lindbergh Boulevard St. Louis, Missouri 63167

Attest:	1: Lan Lwards
Ulilyall W	ame: DANA 4 WESTER
/	tle: DIRECTOR M & A
STATE OF MISSOURI) ss.:	•
COUNTY OF ST. LOUIS)	
signed and sealed on behalf of said corporation	2001, before me personally came ally known, who being duly sworn did say that he lonsanto Company, that the seal affixed to the said corporation, and that said instrument wan by authority of its Board of Directors; and said lowledged said instrument to be the free act and
_	Kathyn A. Sharp (Notary Public
My commission expires	
KATHRYN A. SHARP Notary Public-Notary Seal STATE OF MISSOURI St. Louis County My Commissing Explans Penember 11, 2004	

METABOLIX, INC. 303 Third Street Cambridge, Massachusetts 02142

Attest:	By: James & Back
	Name: JAMES J. BARBER
- .	Tide: PRESIDENT
STATE OF MASSACHUSETTS)) ss.:	
COUNTY OF MIDDLESEX	
the Presided at CEO of Minstrument is the corporate seal of said corporation by an	by, 2001, before me personally came conally known, who being duly sworn did say that he is etabolix, Inc., that the seal affixed to the foregoing pration, and that said instrument was signed and sealed uthority of its Board of Directors; and said eknowledged said instrument to be the free act and
MY COMMISSION EX JANUARY 24, 20	PIRES Dow T. Sott Notary Public
My commission expires	

Signature page to the Patent Assignment dated May 14, 2001

OFFICIAL

SCHEDULE A to the Patent Assignment

Patents and Patent Applications

1. Title:

METHODS OF PHA EXTRACTION AND RECOVERY

USING NON-HALOGENATED SOLVENTS

Inventor(s):

Kurdikar, et al.

U.S. Patent No.:

6,043,063

Issued:

March 28, 2000

Serial No.:

09/060,121

Filed:

April 15, 1997

Country Code	App. Date	- <u>App. No.</u>	Pub. Date	Pub. No.	Status
WO	4/14/98	US9807484	10/22/98	WO9846782	Filed
EP	4/14/98	US9807484	2/2/00	09757588	Pending

2. Title:

DNA SEQUENCE USEFUL FOR THE PRODUCTION OF

POLYHYDROXYALKANOATES

Inventor(s):

Kruger, et al.

U.S. Patent No.:

5,750,848 May 12, 1998

Issued: Serial No.:

08/700,576

Filed:

August 13, 1996

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
US (reissue appln.) WO EP JP	5/12/00 8/13/97 8/13/97 8/13/97	09/570842 US9714388 979372737 51005798	2/19/98	WO9806854	Pending Filed Pending 81 Pending

3. Title:

HIGH TEMPERATURE PHA EXTRACTION USING

PHA-POOR SOLVENTS

Inventor(s):

Kurdikar, et al.

U.S. Patent No.:

6,087,471

Issued:

July 11, 2000

Serial No.:

09/060,120

Filed:

April 14, 1998

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	4/14/98	US9807658	10/22/98	WO9846783	Filed
EP	4/14/98	989156054	1/26/00	EPO973930	Pending

4. Title: RHODOSPIRILLUM RUBRUM

POLY-B-HYDROXYALKANOATE SYNTHASE

Inventor(s): Clemente, et al.

U.S. Patent No.: 5,849,894

Issued: December 15, 1998

Serial No.: 08/756,317

Filed: November 25, 1996 Priority: November 29, 1995

5. Title: MACROMOLECULAR DEGRADATION OF NUCLEIC

ACIDS

Inventor(s): Greer U.S. Patent No.: 5,627,276

Issued: May 6, 1997
Serial No.: 08/424,458
Filed: October 27, 1993

Country Code App. Date App. No. Pub. Date Pub. No. Status WO 10/27/93 GB9302208 5/11/1994 WO9410289 Filed EP 10/27/93 939236246 9/6/95 0669970 Filed AU 676026 10/27/93 6280194 1/31/97 Lapsed BE 10/27/93 939236246 9/6/95 0669970 **Issued** BR 10/27/93 PI93073216 Aband. CA 10/27/93 2146455 5/11/94 Pending DE 9/6/95 0669970 10/27/93 939236246 Issued FI 10/27/93 951997 Pending FR 10/27/93 939236246 9/6/95 0669970 Issued GB 92225614 Aband. 10/27/93 GB 10/27/93 939236246 9/6/95 0669970 Issued П 9/6/95 0669970 10/27/93 939236246 Issued JP 10/27/93 51081994 3/19/96 OP50241596 Pending NO 10/27/93 951595 Aband.

6. Title: POLYESTER COMPOSITION AND OLIGOMERS USEFUL

AS COMPONENTS THEREOF-POLYMER

Inventor(s): Hammond, et al.

U.S. Patent No.: 5,550,173

Issued: August 27, 1996 Serial No.: 08/432,116

Filed: November 4, 1993

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
wo	11/4/93	GB9302279	5/26/94	WO9411445	Filed
EP	11/4/93	939247045	8/30/95	0668893	Aband. AU
	11/4/93 6396	294 12/18/	<i>'</i> 97 68449	99 Lapse	đ
CA	- 11/4/93	2147982	5/26/94		Pending
FI	11/4/93	952163			Pending
GB	11/6/92	92233501			Aband.
JР	11/4/93	51182794	4/23/96	OP50372396	Pending
NO	11/4/93	19951749			Aband.

PROCESS FOR PREPARING FILMS AND COATINGS

Inventor(s): U.S. Patent No.:

Waddington 6,111,006

Issued:

August 29, 2000

08/663,088

Serial No.: Filed: July 7, 1997

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
wo	12/19/94	GB9402761	6/29/95	WO9517454	Filed
EP	12/19/94	959038514	12/11/96	0746585	Filed
BE	12/19/94	959038514	12/11/96.	0746585	Issued
CA	12/19/94	2179522	6/29/95		Pending
DE	12/19/94	959038514	12/11/96	0746585	Issued
FR	12/19/94	959038514	12/11/96	0746585	Issued
GB	12/20/93	93259521			Aband.
GB	12/19/94	959038514	12/11/96	0746585	Issued
IT	12/19/94	959038514	12/11/96	0746585	Issued
JР	12/19/94	51725695	7/29/97	OP50744197	Pending

8. Title: **3-HYDROXYBUTYRATE POLYMERS**

Inventor(s): U.S. Patent No.: Collins, et al. 4,477,654

Issued:

October 16, 1984

Serial No.:

June 29, 1982

Filed:

November 9, 1981

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
EP		813051869	5/26/82	0052459	Filed
BE	10/30/81	813051869	5/26/82	0052459	Issued
СН	10/30/81	813051869	5/26/82	0052459	Lapsed
DE	10/30/81	813051869	5/26/82	0052459	Issued
FR	10/30/81	813051869	5/26/82	0052459	Issued
GB	10/30/81	813051869	<i>5/</i> 26/82	0052459	Issued

IT	10/30/81	813051869	5/26/82	0052459	Aband.
JP	11/18/81	18515381	3/2/94	1560494	Issued
JP	11/18/81	27883890	11/10/92	7034292	Issued
JP	11/18/81	33224391	1/26/93	OP1538393	Issued
NL	10/30/81	813051869	05/26/82	0052459	Lapsed
RU .	11/17/81	335714505	•		Lapsed
SE	10/30/81	813051869	05/26/82	0052459	Lapsed
UA	10/28/93				Lapsed

3-HYDROXYBUTYRATE POLYMER COMPOSITION

Pub. Date

Pub. No.

Status

Inventor(s):

Herring, et al. 5,061,743

U.S. Patent No.: Issued:

October 29, 1991

Serial No.: 07/530,560 Filed: May 30, 1990 Country Code App. Date App. No. EP 5/21/90 5/21/90

COPOLYMER PRODUCTION

Inventor(s): U.S. Patent No.:

Byrom 5,364,778

U.S. Patent r Issued:

November 15, 1994

Serial No.:

08/103,155

Filed:

December 10, 1990

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
ÉP		903131332	6/12/91	. 0431833	Filed
AU	12/7/90	6782790	6/3/93	637657	Issued
BE	12/4//90	903131332	6/12/91	0431833	Issued
BR	12/7/90	PI90062310	8/18/98		Issued
CA	12/10/90	2031888	6/9/91		Issued
DE	12/4/90	903131332	6/12/91	0431833	Issued
FR	12/4/90	903131332	6/12/91	0431833	Issued
GB	12/8/89	89277941		0.025	Aband.
GB	12/4/90	903131332	6/12/91	0431833	Issued
IN	12/6/90	1235DEL90		177461	Aband.
JP	12/7/90	40094790	2/25/00	3036851	Issued
KR	12/8/90	2017590	7/9/99	223341	Issued
NZ	12/7/90	236394	8/23/93	236394	Issued
TW	12/12/90	79110458	1/12/93	NI58448	Issued
ZA	12/6/90	909816	11/27/91	909816	Issued

11. Title:

BIODEGRADABLE POLYESTER PLASTICIZER

 \Diamond

Inventor(s):

Montador, et al.

U.S. Patent No.:

5,516,825 May 14, 1996

Issued: Serial No.:

08/381,903

Filed:

August 10, 1993

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
WO EP AT AU BE CA CH DE	8/10/93 8/10/93 8/10/93 8/10/93 8/10/93 8/10/93	GB9301689 949080568 949080568 4723893 94908568 2142333 94908568 94908568	3/3/94 5/31/95 5/31/95 3/6/97 5/31/95 3/3/94 5/31/95 5/31/95	WO9404607 0655077 0655077 676191 0655077 0655077	Filed Filed Issued Issued Issued Pending Issued Issued
DK ES FI FR	8/10/93 8/10/93 8/10/93 8/10/93	94908568 94908568 950593 94908568	5/31/95 5/31/95 5/31/95	0655077 0655077 0655077	Issued Issued Issued Pending Issued

GB	8/13/92	92171313		•	Aband.
GB	8/10/93	94908568	5/31/95	0655077	Issued
fΤ	8/10/93	94908568	5/31/95	0655077	Issued
JР	8/10/93	50599494	3/5/96	OP50208596	Pending
NL	8/10/93	94908568	5/31/95	0655077	Issued
NO	8/10/93	1 99 50522	1/3/00	306864	Issued
SE	8/10/93	94908568	5/31/95	065507	Issued

POLYMER COMPOSITION COMPRISING A CRYSTALLIZABLE POLYMER STABILIZED IN AN AMORPHOUS OR INCOMPLETE STATE

Inventor(s): U.S. Patent No. Clauss, et al 5,599,891

Issued: Serial No.:

February 4, 1997 08/407,030

Filed:

September 28, 1993

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
wo	9/28/93	GB9302014	4/14/94	WO9407940	Filed
ĘР	9/28/93	939210100	7/12/95	0662097	Allowed
AU	9/28/93	4829693	2/13/97	675664	Lapsed
BR	9/28/93	PI93071302			Aband.
CA	9/28/93	2144449	4/14/94		Pending
FI	9/28/93	951452			Pending
GB	9/28/92	92204478			Pending
ĠВ	9/28/92	92204015			Pending
GB	9/28/92	93046514			Pending
JР	9/28/93	50882694	3/5/96	OP50208896	
KR	9/28/93	70059511999	5.5.70	010000000	Aband.
Ю	9/28/93	19951158			Aband.

13. Title:

PROCESS FOR SEPARATION OF SOLID MATERIALS FROM MICROORGANISMS

Inventor(s):

Cumming, et al 5,622,847

U.S. Patent No.: Issued:

April 22, 1997 08/433,501

Serial No.: Filed:

November 12, 1993

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO EP AT AU	11/12/93 11/12/93 11/12/93	GB9302329 939247524 939247524 5429994	5/26/94 9/13/95 9/13/95 1/31/97	WO9411491 0670891 0670891 675991	Filed Filed Lapsed Lapsed

BE	11/12/93	939247524	9/13/95	0670891	Issued
BR	11/12/93	PI93074280			Aband
CA	11/12/93	2147985	5/26/94	0670891	Aband.
DE	11/12/93	939247524	9/13/95	0670891	Issued
DK	11/12/93	939247524	9/13/95	0670891	Lapsed
ES	11/12/93	939247524	9/13/95	0670891	Lapsed
FI	11/12/93	952292			Pending
FR ·	11/12/93	939247524	9/13/95	0670891	Issued
GB	11/12/92	92237098			Aband.
GB	11/12/92	939247524	9/13/95	0670891	Issued
Π	11/12/92	939247524	9/13/95	0670891	Issued
JР	11/12/92	51186094	4/9/96	OP50313196	Pending
KR	11/12/92	7018941995			Aband.
LU	11/12/92	939247524	9/13/95	0670891	Lapsed
NL .	11/12/92	939247524	9/13/95	0670891	Lapsed
Ю	11/12/92	951867	•		Aband.
PT	11/12/92	939247524	9/13/95	0670891	Lapsed

14. Title: POLYHYDROXYALKANOATES AND FILM FORMATION

THEREFROM

Inventor(s): Waddington
U.S. Patent No.: 5,534,616
Issued: July 19, 1996
Serial No.: 08/491,929
Filed: January 12, 1994

14a. Title: POLYHYDROXYALKANOATES AND FILM FORMATION

THEREFROM

Inventor(s): Waddington U.S. Patent No.: 5,578,382

Issued: November 26, 1996

Serial No.: 08/595,213 Filed: February 1, 1996

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
wo	1/12/94	GB9400056	7/21/94	WO9416000	Filed
EP	1/12/94	949042410	2/7/96	0695321	Filed
AU	1/12/94	5837694	9/11/97	681862	Lapsed
BE	1/12/94	949042410	2/7/96	0695321	Opp.
CA	1/12/94	2153807			Pending
DE	1/12/94	949042410	2/7/96	0695321	Opp.
FI	1/12/94	953411			Pending
FR	1/12/94	949042410	2/7/96	0695321	Орр.
GB	1/13/93	93005544			Aband.
GB	1/12/94	949042410	2/7/96	0695321	Opp.

IT	1/12/94 '	949042410	2/7/96	0695321	Орр.
JP	1/12/94	51583394	6/11/96	OP50541596	Pending

ADHESION PROCESS USING PHA

Inventor(s): U.S. Patent No.: Kemmish 5,711,842

Issued:

January 27, 1998

Serial No.: Filed:

08/591,558 July 11, 1994

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
wo	7/11/94	GB9401496	1/26/95	WO9502649	Filed
EP	7/11/94	949205397	5/1/96	0708804	Filed
AU	7/11/94	7129294	1/15/98	685135	Lapsed
BE	7/11/94	949205397	5/1/96	0708804	Issued
CA	7/11/94	2166613	1/26/95	OPNONE	Pending
DK	7/11/94	949205397	5/1/96	0708804	Issued
FI	7/11/94	960158			Pending
GB	7/11/94	949205397	5/1/96	0708804	Issued
IT	7/11/94	949205397	5/1/96	0708804	Issued
ĴΡ	7/11/94	50439695	1/7/97	OP50015797	Pending
NO	7/11/94	19960153			Aband.

16. Title:

POLYESTER COMPOSITION

Inventor(s):

Hammond, et al

U.S. Patent No.: Issued:

5,753,782 May 19, 1998 08/553,649

Serial No.: Filed:

June 1, 1994

App. Date	App. No.	Pub. Date	Pub. No.	Status
6/1/94	GB9401184	12/8/94	WO9428061	Filed
6/1/94	949170773	3/20/96	0701586	Und. App.
6/1/94	2163444	12/8/94	•	Pending
6/2/93	93113991			Aband.
6/1/94	50042195	2/10/97	OP50145097	Pending
	6/1/94 6/1/94 6/1/94 6/2/93	6/1/94 GB9401184 6/1/94 949170773 6/1/94 2163444 6/2/93 93113991	6/1/94 GB9401184 12/8/94 6/1/94 949170773 3/20/96 6/1/94 2163444 12/8/94 6/2/93 93113991	6/1/94 GB9401184 12/8/94 WO9428061 6/1/94 949170773 3/20/96 0701586 6/1/94 2163444 12/8/94 6/2/93 93113991

17. Title:

SEPARATION PROCESS

Inventor(s): U.S. Patent No.: Holmes, et al 4,910,145

Issued: Serial No.: March 20, 1990 07/374,567

. Filed:

November 5, 1984

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
EP		843075425	6/19/85	0145233	Filed
BE	11/1/84	843075425	6/19/85	0145233	Issued
CA	12/20/85	498397			Issued
CH	11/1/84	843075425	6/19/85	0145233	Issued
DE	11/1/84	843075425	6/19/85	0145233	Issued
GB	11/1/84	843075425	6/19/85	0145233	Issued
IT	11/1/84	843075425	6/19/85	0145233	Issued
JP	11/21/84	24697584	10/1/92	6163892	Issued
NL	11/1/84	843075425	6/19/85	0145233	Issued
SE	11/1/84	843075425	6/19/85	0145233	Issued

POLYMER PRODUCTION/POLYESTERS HAVING C8 AND/OR C10 MONOMER REPEAT UNITS

AND/OR CIO MONOMER REPEAT
Anderson, et al.

Inventor(s):

U.S. Patent No.:

itent No.

Issued: Serial No.: 5,296,362

March 22, 1994 07/507,842

Filed: February 17, 1998

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
EP		903031193	10/17/90	0392687	Filed
AU	1/31/99	5240590	2/18/93	634218	Lapsed
· BR	1/31/99	PI90017323			Aband.
CA	8/2/96	2014238			Aband.
CH	1/31/99	903031193	10/17/90	0392687	Lapsed
DE	2/17/98	903031193	10/17/90	0392687	Issued
FR	2/17/98	903031193	10/17/90	0392687	Issued
GB	2/17/98	903031193	10/17/90	0392687	Issued
IN	12/19/94	319DEL90			Aband.
JР	1/14/00	9747490	12/11/90	OP29959090	Aband.
KR ,	<i>2/27/</i> 95	49461990			Aband.
MW	3/4/93	MW2390			Aband.
NL	1/31/99	903031193	10/17/90	0392687	Lapsed
NZ	1/31/99	233296	10/11/92	233296	Lapsed
SZ	3/4/93	RP461991			Lapsed
TW	1/31/99	79102871	3/21/91		Lapsed
ZA	1/31/99	902399			Lapsed
ZW	11/23/93	4890			Lapsed

19. Title: HV/HB COPOLYMER PRODUCTION

Inventor(s): C x, et al.
U.S. Patent No.: 6,080,562
Issued: June 27, 2000
Serial No.: 07/949,524
Filed: May 24, 1991

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
EP			•	0535012	Filed
AT	5/24/91	919102236	4/7/93	0535012	Lapsed
ΑÙ	5/24/91	7970891	9/15/94	652942	Lapsed
CA	5/24/91	2083695	11/26/91		Pending
DE	5/24/91	919102236	4/7/93	0535012	Issued
GB	5/2 <i>5/</i> 90	919102236		•	Aband.
GB	<i>5/24/</i> 91	90117771	4/7/93	0535012	Issued
IT	5/24/91	919102236	4/7/93	0535012	Issued
JP	5/24/91	50952491			Pending
KR	5/24/91	70296892			Aband.

20. Title: PROCESS FOR THE RECOVERY OF

POLYHYDROXYALKANOIC ACID

Inventor(s): Liddell
U.S. Patent No.: 5,894,062
Issued: April 13, 1999
Serial No.: 08/793,832
Filed: August 15, 1995

App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
8/15/95	GB9501926	2/29/96	WO9606179	Filed
8/15/95	959278979	6/4/97	0776372	Filed
8/15/95	959278979	6/4/97	0776372	Issued
8/1 <i>5/</i> 95	2197783			Pending
8/15/95	959278979	6/4/97	0776372	Issued
8/15/95	970680			Pending
8/15/95	959278979	6/4/97	0776372	Issued
8/18/94	94166907			Aband,
8/15/95	959278979	6/4/97	0776372	Issued
8/15/95	959278979	6/4/97	0776372	Issued
8/15/95	50785096	5/6/98	KOHYO5044609	Pending
8/15/95				Aband.
8/15/95				Aband.
8/15/95	19970739			Aband.
	8/15/95 8/15/95 8/15/95 8/15/95 8/15/95 8/15/95 8/15/95 8/15/95 8/15/95 8/15/95 8/15/95	8/15/95 GB9501926 8/15/95 959278979 8/15/95 959278979 8/15/95 2197783 8/15/95 959278979 8/15/95 970680 8/15/95 959278979 8/18/94 94166907 8/15/95 959278979 8/15/95 959278979 8/15/95 959278979 8/15/95 959278979 8/15/95 959278979	8/15/95 GB9501926 2/29/96 8/15/95 959278979 6/4/97 8/15/95 959278979 6/4/97 8/15/95 2197783 8/15/95 959278979 6/4/97 8/15/95 970680 8/15/95 959278979 6/4/97 8/18/94 94166907 8/15/95 959278979 6/4/97 8/15/95 959278979 6/4/97 8/15/95 959278979 6/4/97 8/15/95 959278979 6/4/97 8/15/95 959278979 6/4/97 8/15/95 50785096 5/6/98	8/15/95 GB9501926 2/29/96 WO9606179 8/15/95 959278979 6/4/97 0776372 8/15/95 959278979 6/4/97 0776372 8/15/95 2197783 8/15/95 959278979 6/4/97 0776372 8/15/95 970680 8/15/95 959278979 6/4/97 0776372 8/18/94 94166907 8/15/95 959278979 6/4/97 0776372 8/15/95 959278979 6/4/97 0776372 8/15/95 959278979 6/4/97 0776372 8/15/95 959278979 6/4/97 0776372 8/15/95 959278979 6/4/97 0776372 8/15/95 959278979 6/4/97 0776372 8/15/95 959278979 6/4/97 0776372 8/15/95 959278979 6/4/97 0776372 8/15/95 959278979 6/4/97 0776372

PRODUCTION OF POLYMER COMPOSITION

Inventor(s): U.S. Patent No.: Issued:

George, et al 5,891,936 April 6, 1999 08/894,346

Serial No.: Filed:

February 12, 1996

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
wo	2/12/96	GB9600305	8/22/96	WO9625452	Filed
EP	2/12/96	969023456	12/3/97	0809669	Filed
BE	2/12/96	969023456		0809669	Issued
DE	2/12/96	969023456	12/3/97	0809669	Issued
FI	2/12/96	973364			Pending
FR ·	2/12/96	969023456	12/3/97	0809669	Issued
GB	2/16/95	95029807			
GB	12/21/95	95262812			
GB	2/12/96	969023456	12/3/97	0809669	Issued
IT	2/12/96	969023456	12/3/97	0809669	Issued
JР	2/12/96	52474596	1/12/99	KOHYO50047699	

22. Title: LATEX OF POLYHYDROXYALKANOATE

Inventor(s): U.S. Patent No.:

George, et al. 5,977,250

Issued:

November 2, 1999

Serial No.:

08/875,976

Filed: February 9, 1996

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
wo	2/9/96	GB9600284	8/15/96	WO9624682	Filed
EP	2/9/96	969019264	11/26/97	0808373	Filed
BE	2/9/96	969019264	11/26/97	0808373	Opp.
DE	2/9/96	969019264	11/26/97	0808373	Орр.
Fl	2/9/96	973297			Pending
FR	2/9/96	969019264	11/26/97	0808373	Орр.
GB	2/9/95	95025219			Aband.
GB	2/9/96	969019264	11/26/97	0808373	Орр.
IT	2/9/96	969019264	11/26/97	0808373	Орр.
JP	2/9/96	52408896	1/19/99	KOHYO50061399	Pending

A METHOD FOR PREPARING A COMPOSTIBLE

LAMINATE WITH POLYCAPROLACTONE AND A POLY

3-HYDROXYALKANOIC ACID

Inventor(s): Serial No.: Karhuketo, et aL

Filed:

08/930,212 February 2, 1998

Under Appeal

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
WO EP CA GB JP	4/4/96 4/4/96 4/4/96 4/7/95 4/4/96	GB9600819 969082908 2217640 95072633 53009596	10/10/96 1/21/98	WO9631347 0819058	Filed Pending Pending Aband, Pending

24. Title:

DISPERSIONS OF POLYHYDROXYALKANOATES IN

WATER

Inventor(s): Serial No.:

George 09/077,953

Filed:

June 19, 2000

Abandoned

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
wo	12/12/96	US9619886	6/19/97	WO9721762	Filed
EP	12/12/96	969448075			Pending
CA	12/12/96	2239980			Pending
GB	12/12/95	95253902			Aband.
ЛР	12/12/96	52223197	2/29/00	2000502375	Pending
MX	12/12/96	984764			Aband.

25. Title:

INCREASING THE PARTICLE SIZE OF POLYMERS

Inventor(s): U.S. Patent No.:

5,798,440

Issued:

August 25, 1998

George, et al.

Serial No.:

08/374,662

Filed:

July 13, 1993

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO EP AT AU BE	7/13/93 7/13/93 7/13/93 7/13/93	GB9301465 939160594 939160594 4576593 939160594	2/3/94 5/17/95 5/17/95 4/16/97 5/17/95	WO9402622 0652969 0652969 677787 0652969	Filed Filed Lapsed Lapsed Issued

BI	₹	7/13/93	P193067569	12/8/98		Aband.
C	4	7/13/93	2137794	2/3/94		Aband.
CI	H	7/13/93	939160594	5/17/95	0652969	Lapsed
Di	Ξ.	7/13/93	939160594	5/17/95	0.652969	Issued
DI	ζ	7/13/93	939160594	5/17/95	0652969	Lapsed
ES	3	7/13/93	939160594	5/17/95	0652969	Lapsed
FI		7/13/93	950284			Pending
FF	L	7/13/93	939160594	5/17/95	0652969	Issued
GI	3	7/24/92	92157916			Aband.
G	3	7/13/93	939160594	5/17/95	0652969	Issued
Œ		7/13/93	939160594	5/17/95	0652969	Lapsed
II		7/13/93	939160594	5/17/95	0652969	Issued
JP		7/13/ 93	50424794	10/12/95	OP50913195	Pending
K	ξ ,	7/13/93	70475494			Aband.
NI		7/13/93	939160594	5/17/95	0652969	Lapsed
N		7/13/93	19950241			Aband.
NZ		7/13/93	254186	11/26/96	254186	Lapsed
RU		7/13 <i>/</i> 93	95104935			Aband.
SE		7/13/93	939160594	5/17/95	0652969	Lapsed
ZA		7/16/93	935179	6/29/94	935179	Lapsed

MULTILAYER BIODEGRADABLE FILM

Inventor(s): Kemmish, et al.
Serial No.: 08/647,909
Filed: May 30, 1996

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
wo	11/29/94	GB9402609	6/8/95	WO9515260	Filed
EP	11/29/94	959021874	9/18/96	0731754	Filed
BE	11/29/94	959021874	9/18/96	0731754	Issued
CA	11/29/94	2177065			Pending
DE	.11/29/94	959021874	9/18/96	0731754	Issued
FI	11/29/94	962251			Pending
FR	11/29/94	959021874	9/18/96	0731754	Issued
GB	11/30/93	93245124			Aband.
GB	11/29/94	959021874	9/18/96	0731754	Issued
Π	11/29/94	959021874	9/18/96	0731754	Issued
JP	11/29/94	51547295	6/24/97	OP50630397	Pending

27. Title:

COPOLYESTERS AND PROCESS FOR THEIR

PRODUCTION

Inventor(s): Collins, et al.

Cour	atry Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>	
	EP	6/21/82	823032149	1/12/83	0069497	Filed	
	AU	5/24/82	8410882	4/16/87	560653	Issued	
	BE	6/21/82	823032149	1/12/83	0069497	Issued	
	CA	7/5/83	431821	7/30/87	1223687	Issued	
	CH	6/21/82	823032149	1/12/83	0069497	Issued	
	DE	6/21/82	823032149	1/12/83	0069497	Issued	
	FR	6/21/82	823032149	1/12/83	0069497	Issued	
	GB	6/21/82	823032149	1/12/83	0069497	Issued	
	IT	6/21/82	823032149	1/12/83	0069497	Issued	
	JP	7/7/82	11831682	6/25/92	3876392	Issued	
	JP .	7/7/82	21877193	5/24/95	4762395	Issued	
	NL	6/21/82	823032149	1/12/83	0069497	Issued	
	NZ ·	6/23/82	201054	6/19/86	201054	Issued	
	NZ	6/23/82	213039	•	213039	Issued	
	SE	6/21/82	823032149	1/12/83	0069497	Issued	
28.	Title:	POLYHYDROXYALKANOATES OF NARROW MOLECULAR WEIGHT DISTRIBUTION PREPARED IN TRANSGENIC PLANTS					
	Inventor(s):	Asrar, et al.					
	U.S. Patent No.:	6,091,002					
	Issued:	August 15, 2	.000				
	Serial No.:	08/912,205					
	Filed:	August 15, 1	997				
	US Divisional	Filed: 11/15/	99 Serial	No.: 09/44040	00 Status: Allow	red	
	US Divisional	Filed: 11/30/	99 Serial	No.: Not know	wn Status	: Pending	
29.	Title:	METHODS	FOR THE BI	OSYNTHESI	S OF POLYES	TERS	
	Inventor(s):	Gottschalk,	et al.				
	Serial No.:	09/380,773					
	Filed:	September 3	, 1999				
Coun	try Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>	
	wo	· 3/3/97	U\$9703994	9/11/98	WO9839453	Filed	
	EP	3/3/97	979159415	10/13/99	0958367	Pending	

PHA COMPOSITIONS AND METHODS FOR THEIR USE

IN THE PRODUCTION OF PHA FILMS

Inventor(s):

Asrar, et al.

Serial No.:

09/122,147

Filed:

July 24, 1998

CPA filed recently under Section 1.53(d)

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
WO	7/24/98	US9815398	2/4/99	WO9905207	Filed
EP	7/24/98	989370895	5/3/00	0996670	Pending

31. Title:

MODIFIED POLYHYDROXYALKANOATES FOR

PRODUCTION OF COATINGS AND FILMS

Inventor(s):

Asrar, et al.

U.S. Patent Nos.:

6,096,810; 6,201,083

Issued:

August 1, 2000; March 13, 2001

Serial Nos.:

09/156,147; 09/609,878

Filed:

September 18, 1998; July 5, 2000

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
WO	9/18/98	US9819461	3/25/99	WO9914268	Filed
EP	9/18/98	989471123	8/2/00	1023378	Allowed

32. Title: PLASTICIZED POLYHYDROXYALKANOATE

COMPOSITIONS AND METHODS FOR THEIR USE IN THE PRODUCTION OF SHAPED POLYMERIC ARTICLES

Inventor(s): U.S. Patent No.: Asrar, et al.

6,127,512

Issued: Serial No.: October 3, 2000 09/179,271

Filed:

October 31, 1997

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	10/27/98	US9822753	5/14/99	WO9923146	Filed
EP	10/27/98	989562459	8/9/00	1025152	Pending

36. Title: HYDROXY-TERMINATED

POLYHYDROXYALKANOATES

Inventor(s): Asrar, et al. U.S. Patent No.: 5,994,478

Issued: November 30, 1999

Serial No.: 09/063,256 Filed: April 20, 1998

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
US (Divisional)	10/1/99	09/410708	3/20/01	6204341	Issued
US (Divisional)	4/20/98	(Not known)	•		
US (Divisional)	8/17/00	09/640641			Allowed
wo	4/20/98	US9807967	10/29/98	WO9848028	Filed
wo	6/14/99	US9913321	12/16/99	WO9964617	Filed
EP	4/20/98	989184924	2/9/00	0977882	Pending
EP	6/14/99	US9913321			Pending
EP (C-I-P)	6/14/99	99275100	4/4/01	1088093	Pending

36a. Title: HYDROXY-TERMINATED

POLYHYDROXYALKANOATES

Inventor(s): Asrar, et al. U.S. Patent No.: 6,156,852

Issued: December 5, 2000

Serial No.: 09/096,797 Filed: April 29, 1997

37. Title: PRODUCTION OF POLYHYDROXYALKANOATE IN

PLANTS

Inventor(s): Bright, et al.

U.S. Patent No.: 5,502,273; 6,175,061

Issued: March 26, 1996; January 16, 2001

Serial No.: 08/536,123; 08/536123

Filed: September 28, 1994; September 29, 1995

CPA Filed: April 20, 2000

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
WO	4/23/92	GB9200742	11/12/92	WO9219747	Filed
EP	4/23/92	929089209	4/6/94	0589898	Pending
AU	4/23/92	1579792	1/12/95	655816	Lapsed
CA	4/23/92	2109221			Pending
GB	4/24/91	910876569			Aband.
JP	4/23/92	50805792			Pending

PRODUCTION OF POLYHYDROXYALKANOATE

Inventor(s):

Liebergesell, et al.

Serial No.: Filed:

08/178,257 July 15, 1992

Petition to Revive Granted: February 20, 2001

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	<u>Status</u>
WO EP	7/15/92 7/15/92	GB9201291 929145936	2/4/93 5/4/94	WO9302194 0594678	Filed Pending
AU	7/15/92	2312792	9/15/96	671595	Lapsed
CA	7/15 / 92	2113432			Pending
GB	7/16/91	91152454			Aband.
JР	7/15/92	50266993			Pending

39. Title: IMPROVED PRODUCTION OF

POLYHYDROXYALKANOATE USING

GRANULE-BINDING PROTEIN WHICH CONTROLS

GRANULE SIZE AND NUMBER

Inventor(s): U.S. Patent No.: Innis 6,022,729

Issued:

February 8, 2000

Serial No.: Filed:

08/702,870 July 11, 1995

App. Date App. No.

Pub. No. Pub. Date

Status

US GB 7/11/95 7/18/94 08/500735 94145067

Pending(?) Aband.

40. Title: PREVENTION OF GELATION OF

POLYHYDROXYALKANOATE SOLUTIONS USING

Pub. Date

SHEAR

Inventor(s):

Serial No.:

60/188,440

Filed:

March 10, 2000

Country Code

App. Date App. No.

Not known

Pub. No.

WO

3/5/01

Pending

Status

41. Title: POLYHYDROXYALKANOATE COATINGS

Inventor(s): U.S. Patent No.: Asrar et al. 6,025,028

Issue:

2/15/00

Serial No.:

60/053,724

Filed:

7/25/97

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	7/24/98	US9815149	2/4/99	WO9904948	Filed
EP	7/24/98	989359153	5/10/00	0998381	Pending

42. Title:

NUCLEATING AGENTS FOR

POLYHYDROXYALKANOATES AND OTHER THERMOPLASTIC POLYESTERS AND THEIR

PRODUCTION

Inventor(s): U.S. Patent No.: Asrar et al. 5,973,100

U.S. Patent No. Issued:

October 26, 1999

Serial No.:

09/122440

Filed:

7/24/98

Country Code	App. Date	Pat. No.	Pub. Date	<u>Status</u>
WO	07/24/98	WO9905208	2/4/99	Pending
EP	07/24/98	0996671	2/4/99	

SCHEDULE B t the Patent Assignment

Patents and Patent Applications That Have Not Been Maintained

1. Title:

POLYMER BLENDS AND COMPATIBILIZERS

Inventor(s):

Ballard, et al.

U.S. Patent No.:

5,478,892

Issued:

December 26, 1995

Status: Serial No.: Lapsed 08/295,626

Filed:

August 24, 1994

Country Code	App. Date	Арр. Йо.	Pub. Date	Pub. No.	Status
WO	2/26/93	GB9300401	9/2/93	WO9317064	Filed
EP		939042644	12/21/94	0629219	Filed
AU	2/26/93	3572193	1/11/96	666710	Lapsed
BE	2/26/93	939042644	12/21/94	0629219	Lapsed
CA	2/26/93	2128435	9/2/93		Aband.
DE	2/26/93	939042644	12/21/94	0629219	Lapsed
FI	2/26/93	943930			Aband.
FR	2/26/93	939042644	12/21/94	0629219	Lapsed
GB	2/26/93	939042644	12/21/94	0629219	Lapsed
JP	2/26/93	51467093	5/18/95	0P50444995	Aband.
KR	2/26/93	70298194			Aband.
NO	2/26/93	19943157			Aband.
NZ	2/26/93	249218	1/26/96		Lapsed

2. Title:

POLYMER COMPOSITION CONTAINING

POLYHYDROXYALKANOATE AND METAL

COMPOUND

Inventor: U.S. Patent No.: **Hammond** 5,646,217

U.S. Patent No. Issued:

July 8, 1997 Lapsed

Status: Serial No.:

Dapsed 08/433,343

Filed:

November 4, 1993

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	11/4/93	GB9302280	5/26/94	WO9411440	Filed
ÉP	11/4/93	939247052	9/6/95	0669959	Aband.
ΑU	11/4/93	5426894	12/19/96	674361	Lapsed
CA	11/4/93	2147857	5/26/94		Aband.
FI	11/4/93	952162			Aband.
GB	11/6/92	92233519			Aband.

JP 11/4/93 51182894 4/16/96 OP54350096 Aband. NO 11/4/93 951766 Aband.

3. Title:

PROCESS OF POLYESTERS

Inventor(s):

Liggat, et al. 5,789,536

U.S. Patent No.: Issued:

August 4, 1998

Status: Serial Nos.: Lapsed 08/553,642

Serial Nos. Filed:

June 1, 1994

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	6/1/94	GB9401181	12/8/94	WO9428047	Filed
EP	6/1/94	949170740	3/20/96	0701580	Aband.
CA	6/1/94	2163552	12/8/94		Aband.
GB	6/2/93	93114023			Aband.
ID	6/1/94	52585594	10/29/96	OP51029396	Aband.

4. Title:

POLYMER COMPOSITIONS AND PROCESSES PRODUCED FROM HYDROXYALKANOIC ACID

Inventor(s):

Greer, et al.

U.S. Patent No.:

5,525,658 June 11, 1996

Issued: Status:

Filed:

Lapsed

Serial Nos.:

08/374,663 July 15, 1995

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	7/15/93	GB9301492	2/3/94	WO9402541	Filed
EP		939160859	5/10/95	0651775	
AU	7/15/93	4578293			Lapsed
BE	7/15/93	939160859	5/10/95	0651775	Lapsed
CA	7/15/93	2137580	2/3/94		Aband.
FI		7/15/93	950285		Aband.
FR	7/15/93	939160859	5/10/95	0651775	Lapsed
GB	7/15/93	939160859	5/10/95	0651775	Lapsed
JP	7/15/93	50425994	10/12/95	OP50926595	Aband.
ZA	7/21/93	935288			Lapsed

5. Title:

POLYESTER COMPOSITION

Inventor(s):

Liggat, et al. 5,693,389

U.S. Patent No.: Issued:

December 2, 1997

Status:

Lapsed

Serial Nos.: Filed: 08/553,412 May 20, 1994

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	5/20/94	GB9401095	12/8/94	W09428070	Filed
EP	5/20/94	949156400	3/13/96	0700418	Aband.
ĀŪ	5/20/94	6727594	11/13/97	683466	Lapsed
CA	5/20/94	2162173	12/8/94		Aband.
FI	5/20/94	955645			Aband.
GB	5/24/93	93107126			Aband.
JР	5/20/94	50035895	11/5/96	OP51049896	Aband.
NO	5/20/94	954748			Aband.

PROCESSING OF POLYESTERS

Inventor(s):

Liggat, et al.

U.S. Patent No.:

5,874,040 February 23, 1999

Issued: Status:

Lapsed

Status: Serial Nos.: Filed:

08/892,311 July 14, 1997

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	6/1/94	GB9401183	12/8/94	WO9428049	Filed
EP	6/1/94	949170765	3/20/96	0701582	Aband.
CA	6/1/94	2163553			Aband.
GB	6/2/93	93114007			Aband.
IP	6/1/94	50042095	2/20/97	OP50144997	Aband.

7. Title:

PROCESS FOR PREPARING FILMS AND COATINGS

Inventor(s):

Liddell, et al. 5,691,174

U.S. Patent No.: Issued:

November 25, 1997

Status: Serial Nos.:

Filed:

Lapsed 08/530,332 April 7, 1994

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	4/7/94	GB9400741	10/27/94	WO9424302	Filed
EP		949120273	1/31/96	0694074	Filed
AU	4/7/94	6434494	1/31/97	676035	Lapsed
BE	4/7/94	949120273	1/31/96	0694074	Lapsed
BR	4/7/94	P194064520			Aband.
CA	4/7/94	2160564	10/27/94		Aband.
DE	4/7/94	949120273	1/31/96	0694074	Lapsed
Fl	4/7/94	954836			Aband.
FR	4/7/94	949120273	1/31/96	0694074	Lapsed
GB	4/7/94	949120273	1/31/96	0694074	Aband.
IN .	4/13/94	440DEL94			Aband.

IT JP	4/7/94 4/7/94	949120273 52287394	1/31/96 9/24/96	0694074 OP50888196	Lapsed Aband
MX	4/13/94	942657			Aband.
NO	4/7/94	954088			Aband.
ZA	4/12/94	942515			Lapsed

COPOLYMER PRODUCTION

Inventor(s):

Anderson, et al.

U.S. Patent No.:

5,264,546

Issued:

November 23, 1993

Status:

Lapsed

Serial Nos.: Filed: 07/870,480 April 17, 1992

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
EP		903042679	11/7/90	0396289	Lapsed
ΑT	4/20/90	903042679	11/7/90	0396289	Lapsed
ΑŪ	4/27/90	5452390	10/8/92	629632	Lapsed
BE	4/20/90	903042679	11/7/90	0396289	Lapsed
BR	9/2/90	PI90020600			Aband.
CA	5/1/90	2015830			Aband.
CH	4/20/90	903042679	11/7/90	0396289	Lapsed
DE	4/20/90	903042679	11/7/90	0396289	Lapsed
ES	4/20/90	903042679	11/7/90	0396289	Lapsed
FR	4/20/90	903042679	11/7/90	0396289	Aband.
GB	4/20/90	903042679	11/7/90	0396289	Lapsed
IN	4/25/90	404DEL90	5/30/98	0396289	Lapsed
IT	4/20/90	903042679	11/7/90	0396289	Lapsed
JP	5/2/90	11668590	2/28/91	OP4708291	Lapsed
KR	5/1/90	61931990			Aband.
LU	4/20/90	903042679	11/7/90	0396289	Lapsed
MW	4/26/90	MW4090			Lapsed
NL	4/20/90	903042679	11/7/90	0396289	Lapsed
NZ	4/26/90	233,452			Lapsed
SE	4/20/90	903042679	11/7/90	0396289	Lapsed
TRAN	4/27/90	900038			Lapsed
TW	5/15/90	79103931	10/1/91		Lapsed
ZA	4/24/90	903108			Lapsed

9. Title:

COPOLYESTERS AND METHODS OF THEIR PRODUCTION

Inventor(s):

Cox, et al.

U.S. Patent No.:

5,977,291

Issued:

November 2, 1999

Status: Serial No.: Issued 08/809,946

C	لما	
r:	lea	

September 21, 1995

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
wo	9/21/95	GB9502257	3/28/96	WO9609402	Filed
EP	9/21/95	959321019	7/16/97	0783587	Aband.
CA	9/21/95	2200473			Aband.
Fl	9/21/95	971199			Aband.
GB	9/22/95	94190824	•		Aband.
JP	9/21/95	51070096	6/16/98	KOHYO50601298	Aband.
KR	9/21/95	7018681997			Aband.
MX	9/21/95	972206	12/1/97		Aband.
NO	9/21/95	19971279			Aband.

10. Title:

HV/HB COPOLYMER PRODUCTION

Inventor(s):

Cox, et al.

U.S. Patent No.: Issued:

6,080,562 June 27, 2000

Status:

Issued 07/949,524 May 24, 1991

Serial No.: Filed:

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	10/19/92	EP9100978	12/12/91	WO9118995	Filed
EP	9/13/95	919102236	4/7/93	0535012	Filed
TA	5/24/91	919102236	4/7/93	0535012	Lapsed
AU	5/24/91	7970891	9/15/94	652942	Lapsed
CA	5/24/91	2083695	11/26/91		Pending
DE	5/24/91	919102236	4/7/93	0535012	Issued
GB	5/24/91	919102236	4/7/93	0535012	Issued
· IT	5/24/91	919102236	4/7/93	0535012	Issued
JР	5/24/91	50952491			Pending
KR	<i>5/</i> 24/91	70296892			Aband.
NL	5/24/91	919102236	4/7/93	0535012	Lapsed

11. Title:

ALIPHATIC POLYESTER COMPOSITION

Inventor(s):

Lehrle, et al. 6,005,066

U.S. Patent No.:

Issued:

December 21, 1999

Status: Serial No.: Lapsed 08/768,030

Filed:

June 13, 1995

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
wo	6/13/95	GB9501375	12/21/95	WO9534599	Filed
EP	6/13/95	959244047	4/2/97	0765360	Aband.
CA	6/13/95	2192688			Aband.

GB 6/13/94 94117926 Aband. JP 6/13/95 50180096 5/6/98 KOHYO50458398 Aband.

12. Title:

PROCESS OF RECOVERING POLYMERS OF

HYDROXYALKANOIC ACIDS

Inventor(s):

George, et al.

U.S. Patent No.:

5,952,460

Issued:

September 14, 1999

Status: Serial No.: Lapsed 08/793,019

Filed:

August 15, 1995

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	8/15/95	GB9501925	2/29/96	WO9606178	Filed
ĒP	8/15/95	959278961	6/4/97	0776371	Aband.
CA	8/15/95	2197782			Aband.
FI	8/15/95				Aband.
GB	8 /1 <i>8/</i> 94	94166915			Aband.
JР	8/15/95	50784996	5/6/98	50445998	Aband.
KR	8/15/95	7010621997			Aband.
MX	8/15/95	971249			Aband.
NO	8/15/95	19970738			Aband.

13. Title:

POLYESTER COMPOSITION

Inventor(s):

Blanshard, et al.

U.S. Patent No.:

5,760,170

Issued:

June 2, 1998 Lapsed

Status: Serial No.:

08/809,316

Filed:

September 8, 1995

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	9/8/95	GB9502150	3/14/96	WO9607697	Filed
EP	9/8/95	959313016	6/25/97	0779910	Aband,
CA	9/8/9 5	2199476			Aband.
FI	9/8/95	970984			Aband.
GB	9/9/94	94181740			Aband.
-JP	9/8/95	50932896			Aband.
· KR	9/8/95	7015671997			Aband.
MX	9/8/95	971818			Aband.
NO	9/8/95	971055			Aband.

14. Title:

STRUCTURE HAVING CONTROLLED WATER

RESISTANCE

Inventor:

Brunger

U.S. Patent No.:

5,560,962

Issued:

October 1, 1996

Status: Serial No.: Lapsed 08/204,263

Filed:

November 11, 1992

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
wo	11/11/92	GB9202078	5/27/93	WO9310308	Filed
EP	11/11/92	929229011	9/7/94	0613510	Filed
BÉ	11/11/92	929229011	9/7/94	0613510	Lapsed
DE	11/11/92	929229011	9/7/94	0613510	Lapsed
FR	11/11/92	929229011	9/7/94	0613510	Lapsed
GB	11/11/92	929229011	9/7/94	0613510	Lapsed
ĮΤ	11/11/92	929229011	9/7/94	0613510	Lapsed
ЛР	11/11/92	50906593	2/2/95	OP50110895	Aband.

15. Title:

PROCESS FOR THE MICROBIOLOGICAL

PRODUCTION OF PHA POLYMERS

Inventor(s):

Naylor, et al.

U.S. Patent No.:

5,871,980

Issued:

February 16, 1999

Status: Serial No.: Lapsed 08/894,347

Serial No.: 08/894,347
Filed: February 9, 1996

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	2/9/96	GB9600293	8/22/96	WO9625509	Filed
EP	2/9/96	969019322	12/3/97	0809706	Aband.
Fl	8/15/97	973365			Aband.
GB	2/17/95	95031746			Aband.
· JP	2/9/96	52474296	1/6/99	KOHYO50000899	Aband.

P. 1

* * COMMUNICATION RESULT REPORT (JAN. 16. 2003 5:41PM) * * *

TTI HOLLAND & KNIGHT

TRANSMITTED/STORED JAN, 16. 2003 5:28PM **OPTION** FILE MODE

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E-2) BUSY E-4) NO FACSIMILE CONNECTION

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Providence St. Petersburg San Antonio

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Others

Portland

Northern Virginia

"Representative Offices

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NAMOE	COMPANY/FIRM	FAX NUMBER	
Washington	D.C.	703 308 0027	
CITY	STATE	(TELEPHONE NUMBER)	_

FROM:		
Patrea L. Pabst	404 817-8473	鎌 35
NAME	TELEPHONE	TOTAL PAGES (Including Cover Sheet)
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CLIENT NAME: MOBT 140

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